

# Localization of microseismic events and determination of source parameters

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## Abstract

© Published under licence by IOP Publishing Ltd. We examine the problem of localization determining and a microseismic moment tensor of single microseismic event in the presence of strongly correlated noise. This is a typical problem occurring in monitoring of microseismic events from a daylight surface under conditions of a producing field or surface monitoring of hydraulic fracturing. We offer the solution to this problem based on the method of maximum likelihood. The article presents of decision of this problem and the results of numerical experiments. We discuss some features and problems of the proposed approach and estimate the required computing resources. We develop the problem of determination direction of fracture propagation from microseismic event.

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